

Document Type Definition

```
<!-- Root Directory Structure -->

<!ELEMENT Record-root (Owner, Header, Data)>
<!ATTLIST Record-root name CDATA '/'> ~40

<!ELEMENT Record-object (Header, Data, Annotation*)>
<!ATTLIST Record-object name CDATA #REQUIRED
    type CDATA #IMPLIED
    url CDATA #IMPLIED> ~44

<!ELEMENT Header (Author, Owner?, Creation-date, Privileges)> ~48

<!ELEMENT Author EMPTY>
<!ATTLIST Author alias CDATA #REQUIRED> ~52

<!ELEMENT Owner EMPTY>
<!ATTLIST Owner alias CDATA #REQUIRED> ~56

<!ELEMENT Creation-date EMPTY>
<!ATTLIST Creation-date time CDATA #IMPLIED> ~60

<!ELEMENT Privileges (Privilege*)>

<!ELEMENT Privilege EMPTY>
<!ATTLIST Privilege role CDATA #REQUIRED
    read (t|f) 'f'
    create (t|f) 'f'
    modify (t|f) 'f'
    delete (t|f) 'f'
    annotate (t|f) 'f' > ~64

<!-- the data section --> ~68

<!ELEMENT Data (Record-object*)>
<!ATTLIST Data type CDATA 'text/xml'
    url CDATA #REQUIRED>

<!ELEMENT Annotation (Ann-author, Ann-date, Ann-text)>
<!ELEMENT Ann-author (#PCDATA)>
<!ELEMENT Ann-date (#PCDATA)>
<!ATTLIST Ann-date datestring CDATA #IMPLIED> ~72
<!ELEMENT Ann-text (#PCDATA)>
```

FIG. 3

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```
<!DOCTYPE Data SYSTEM "record.dtd">
<Data>
  <Record-object name="BGL 1">
    <Header>
      <Author alias="glucometer" />
      <Creation-date time="3/10/1999 7:00:00" />
      <Privileges>
        <Privilege role="owner" read="t" modify="t" annotate="t" />
        <Privilege role="staff" read="t" delete="t" annotate="t" />
        <Privilege role="other" read="t" />
      </Privileges>
    </Header>
    <Data url="http://www.server18a.org/doc/xml/bgl1.xml"></Data>
  </Record-object>
  <Record-object name="BGL 2">
    <Header>
      <Author alias="glucometer" />
      <Creation-date time="3/10/1999 7:00:00" />
      <Privileges>
        <Privilege role="owner" read="t" modify="t" annotate="t" />
        <Privilege role="staff" read="t" delete="t" annotate="t" />
        <Privilege role="other" read="t" />
      </Privileges>
    </Header>
    <Data url="http://www.server18a.org/doc/xml/bgl2.xml"></Data>
  </Record-object>
  <Record-object name="BGL 3">
    <Header>
      <Author alias="glucometer" />
      <Creation-date time="3/10/1998 9:00:00" />
      <Privileges>
        <Privilege role="owner" read="t" modify="t" annotate="t" />
        <Privilege role="staff" read="t" delete="t" annotate="t" />
      </Privileges>
    </Header>
    <Data url="http://www.server18b.org/doc/xml/bgl3.xml"></Data>
  </Record-object>
</Data>
```

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FIG. 4

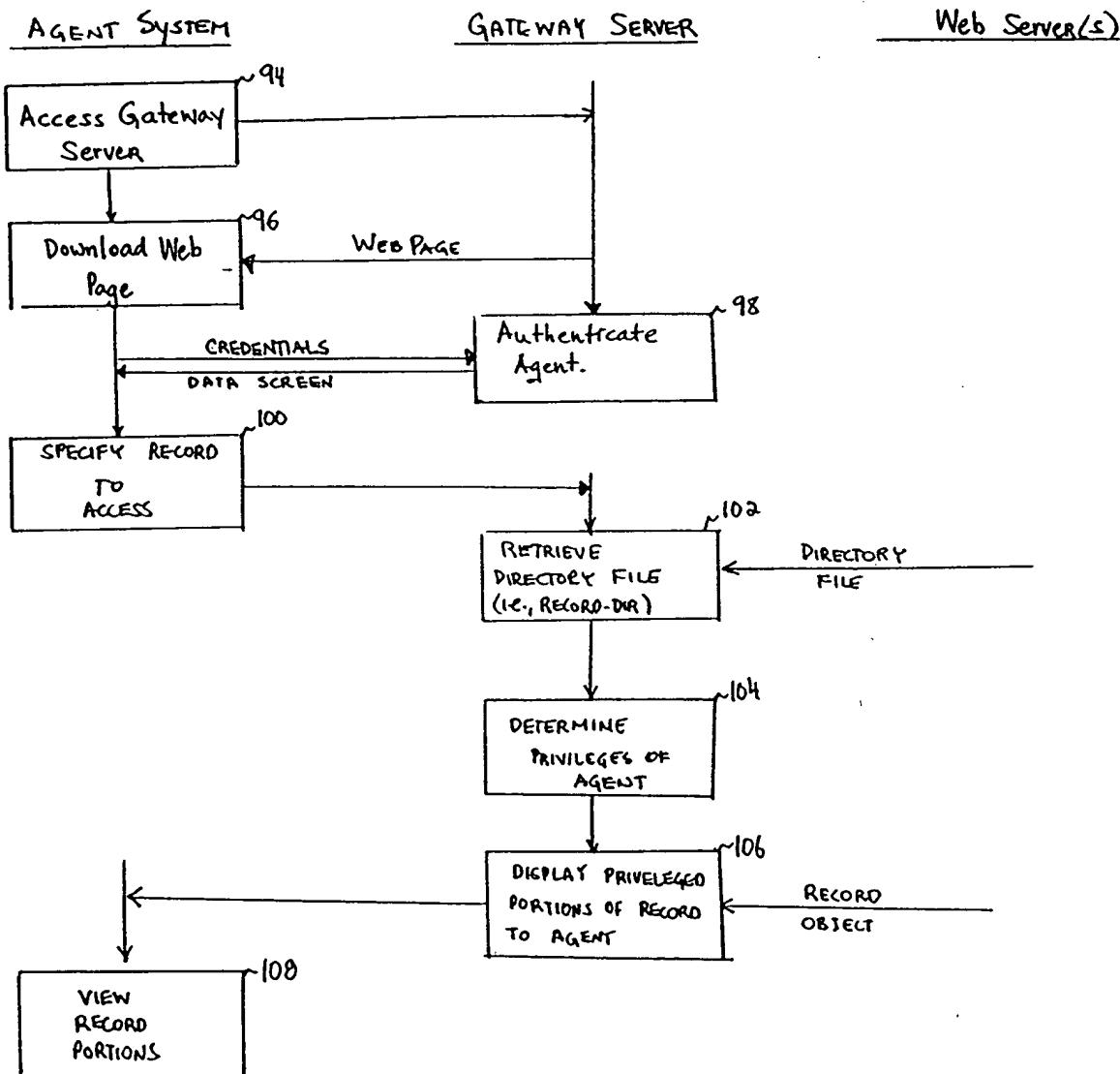


FIG. 5

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```
<!DOCTYPE Record-object SYSTEM "record.dtd">
<Record-object type="record-dir" name="Immunizations">
  <Header>
    <Author alias="ann">Ann</Author>
    <Creation-date time="5/7/1999 00:53:00" />
    <Privileges>
      <Privilege role="owner" read="t" create="t" modify="t" />
    </Privileges>
  </Header>

  <Data>
    <Record-object name="imm-1">
      <Header>
        <Author alias="ann">Ann</Author>
        <Creation-date time="5/7/1999 00:53:00" />
        <Privileges>
          <Privilege role="owner" read="t" annotate="t" />
        </Privileges>
      </Header>
      <Data url="http://www.Server18a.org/doc/xml/imm-1.xml"></Data>
    </Record-object>
    <Record-object name="imm-2">
      <Header>
        <Author alias="ann">Ann</Author>
        <Creation-date time="5/7/1999 00:53:00" />
        <Privileges>
          <Privilege role="owner" read="t" annotate="t" />
        </Privileges>
      </Header>
      <Data url="http://www.Server18b.org/doc/xml/imm-2.xml"></Data>
    </Record-object>
  </Data>
</Record-object>
```

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128 126 140

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```
<!DOCTYPE Record-object SYSTEM "record.dtd">
<Record-object type="record-dir" name="Immunizations">
  <Header>
    <Author alias="ann">Ann</Author>
    <Creation-date time="5/7/1999 00:53:00" />
    <Privileges>
      <Privilege role="owner" read="t" create="t" modify="t" />
      <Privilege role="doc-1" read="t" />
    </Privileges>
  </Header>
  <Data>
    <Record-object name="imm-1">
      <Header>
        <Author alias="ann">Ann</Author>
        <Creation-date time="5/7/1999 00:53:00" />
        <Privileges>
          <Privilege role="owner" read="t" annotate="t" />
          <Privilege role="doc-1" read="t" annotate="t" />
        </Privileges>
      </Header>
      <Data url="http://www.server18a.org/doc/xml/imm-1.xml"></Data>
    </Record-object>
    <Record-object name="imm-2">
      <Header>
        <Author alias="ann">Ann</Author>
        <Creation-date time="5/7/1999 00:53:00" />
        <Privileges>
          <Privilege role="owner" read="t" annotate="t" />
          <Privilege role="doc-1" read="t" annotate="t" />
        </Privileges>
      </Header>
      <Data url="http://www.server18b.org/doc/xml/imm-2.xml"></Data>
    </Record-object>
  </Data>
</Record-object>
```

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24 136 146 125

128 140 148 126

FIG. 6B